

Applicant : Michael F. Roberts et al.
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Attorney's Docket No.: 00216-368004 / OB-84D

REMARKS

Applicants acknowledge the election of Group II, claims 52-55. Claims 33-37 and 45-51 have been cancelled. Claims 52-55 and newly added claim 56 are in the case.

Regarding the Examiner's comment concerning prior art, Applicants note that they have cited all relevant prior art of which they are aware to date.

Applicants' specification has been amended to include a general formula for polymers commercially available under the tradename "PEBAX". This formula was inadvertently omitted from the specification as filed. In the specification as filed, these polymers are described and are identified by their tradename (p. 6, lines 26-29, and p. 7, lines 5-21). The name of the manufacturer of PEBAX polymers, ELF Atochem, is also provided at p. 6, lines 26-29. The formula that is being added is merely the equivalent, in chemical nomenclature, of the description provided in the specification as filed, as evidenced by the PEBAX product literature submitted herewith. Accordingly, no new matter has been added by this amendment.

The Examiner's informal amendment is acceptable to Applicants.

Claims 52-54 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,151,745. A terminal disclaimer is filed herewith to obviate this ground of rejection.

Claim 55 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Libby (U.S. Patent 1,251,250) in view of Michaels (U.S. Patent 5,040,260).

As amended, claim 55 features an oral brush suitable for massaging the gums including a head portion that includes a surface defined by two outer longitudinal edges, and a brush portion. The brush portion includes a single row of first bristles, comprising a thermoplastic elastomer, extending from the surface along one outer longitudinal edge. In addition to the first bristles, the brush portion includes a plurality of non-elastomeric bristles extending from the surface immediately adjacent to the single row of first bristles.

Applicants have found that consumers generally prefer toothbrushes that have relatively small heads. Moreover, a small toothbrush head generally makes brushing more comfortable, encouraging the user to brush longer, and allows more of the oral cavity to be reached during

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brushing. Applicants have also found that, to optimize cleaning and gum-massaging, it is desirable that the brush include a combination of elastomeric and non-elastomeric bristles. To provide a brush head having a desirably small size, while still including both elastomeric and non-elastomeric bristles, it is preferred that the toothbrush head include only a single row of elastomeric bristles along one or both of the longitudinal outer edges of the toothbrush head.

Libby teaches a removable massaging element with three rows of elastomeric bristles disposed on each longitudinal side of the toothbrush head, for a total of six rows of elastomeric bristles. These elastomeric bristles surround a large array of non-elastomeric bristles. As a result, Libby's brush head appears to be significantly larger than conventional toothbrush heads. Libby admits that the brush head is "somewhat wider than the head of an ordinary toothbrush" (col. 1, lines 40-44).

Michaels teaches a toothbrush head that includes a "plurality of integral projections extending outwardly" from the head. In Michael's toothbrush head, all of the projections are made of a thermoplastic elastomer material; no non-elastomeric bristles are included.

Thus, Michaels would have provided no suggestion to reduce the number of rows of elastomeric bristles used in the Libby toothbrush. If anything, Michaels would most likely have suggested to the artisan to add more rows of elastomeric bristles, and/or to eliminate the non-elastomeric bristles of Libby. As a result, combining the teachings of Michaels with those of Libby would not have resulted in Applicants' invention as now claimed. As a result, claim 55 and newly added claim 56 should now be in condition for allowance.

Claims 52-54 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Pavone et al (U.S. Patent 5,325,560) in view of Modic (U.S. Patent 5,723,543).

Claim 52, as amended, features an oral brush suitable for massaging the gums, including an elongated handle, a head portion and a brush portion. The brush portion includes at least one elastomeric element extending a sufficient distance from the head portion to contact the interdental spaces.

Pavone teaches two types of elastomeric elements that are useful for an orthodontic toothbrush. Neither of these elements is disposed to contact the interdental spaces of a user. The first element is "flexible member 26" that is disposed underneath the central bristles. Pavone states that "this flexible member 26 serves as an air pocket." This first flexible member, because

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it is disposed at the base of the bristles, is not capable of massaging the gums and contacting the interdental spaces as recited in claim 52. The second element taught by Pavone is "bumper 38." Bumper 38 is positioned along the side of the toothbrush head, and thus, like flexible member 26, it is not capable of massaging the gums and contacting the interdental spaces.

Thus, Pavone does not teach or suggest the Applicants' claimed gum-massaging toothbrush because neither element taught by Pavone is capable of massaging the gums and contacting the interdental spaces.

Modic teaches a new thermoplastic elastomer composition. Potential uses include "automotive instrument panels, knobs, buttons, pen/pencils grips, cellular phones, toothbrushes, handles and tool grips" (col. 4, lines 25-27). Modic does not describe where or how the thermoplastic elastomer compositions would be used on a toothbrush, and thus does not supply what is lacking in the Pavone reference.

Combining Pavone with Modic will not produce the present invention, because neither reference teaches or suggests an oral brush, suitable for massaging the gums, that includes an elastomeric element extending a sufficient distance from the toothbrush head to contact the interdental spaces. Combining Pavone with Modic will produce only an orthodontic toothbrush with flexible members that, due to their disposition, are incapable of massaging the gums and contacting the interdental spaces.

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